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(71) Applicant *(for all designated States except US)*: KONINKLIJKE PHILIPS ELECTRONICS, N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: EPSTEIN, Michael, A. [US/US]; 10 Dorset Road, Spring Valley, NY 10977 (US).

(74) Agent: HALAJIAN, Dicran; PHILIPS INTELLECTUAL PROPERTY & STANDARDS, 580 White Plains Road, Tarrytown, NY 10591 (US).

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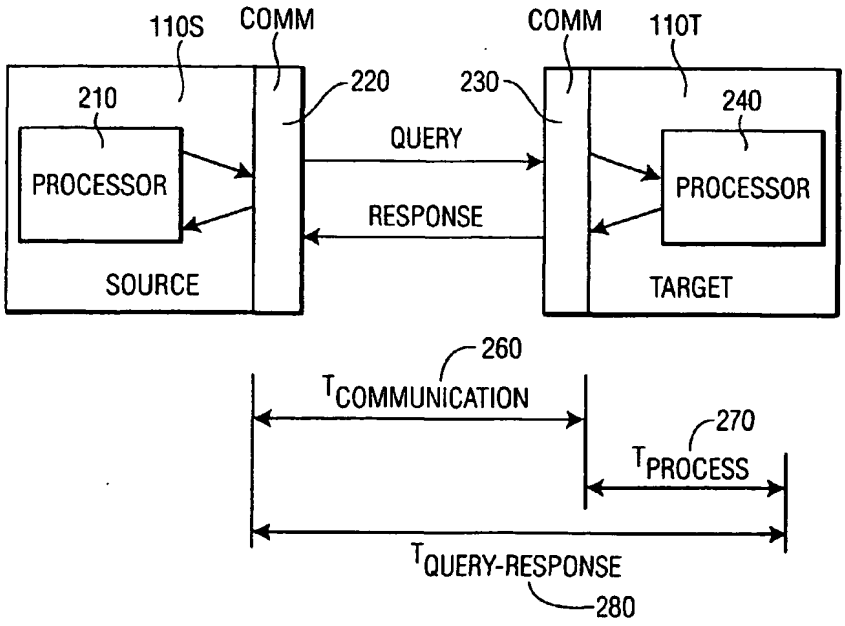
[Continued on next page]

(54) Title: USING TIMING SIGNALS TO DETERMINE PROXIMITY BETWEEN TWO NODES



(57) Abstract: A system and method facilitates a determination of proximity between nodes based on the communication time between the node. A source node communicates a query, or "ping", to a target node. The target node is configured to automatically send a response to the sender of such a query. The communication time is determined based on the time duration between the transmission of the query and receipt of the response at the source node. The communication time is compared to a threshold value to determine whether the target node is local or remote relative to the source node.

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Declarations under Rule 4.17:

- *as to the identity of the inventor (Rule 4.17(i)) for all designations*
- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations*

Published:

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04L29/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H04L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX, IBM-TDB

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	STEVENS ET AL: "TCP/IP ILLUSTRATED, Vol. 1. THE PROTOCOLS" , TCP/IP ILLUSTRATED. VOL. 1: THE PROTOCOLS, PROFESSIONAL COMPUTING SERIES, READING, MA: ADDISON WESLEY, US, VOL. VOL. 1, PAGE(S) 85-96 XP002106390 ISBN: 0-201-63346-9 page 85 -page 87 ---	1-10
Y	US 2002/016831 A1 (BARATZ ARIK ET AL) 7 February 2002 (2002-02-07) abstract paragraphs '0002!,'0004!,'0019!-'0026!,'0062!-'0065!, '0110!-'0112!,'0206!,'0210! --- -/--	1,2,5-7, 10

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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"A" document defining the general state of the art which is not considered to be of particular relevance

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Date of the actual completion of the international search	Date of mailing of the international search report
6 June 2003	13/06/2003

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Lopez Monclus, I.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6 308 273 B1 (SHAH BHARAT ET AL) 23 October 2001 (2001-10-23) abstract; figure 3 column 1, line 1-17,55-63 column 5, line 12-50	3,4,8,9
P,X	US 2003/046022 A1 (SILVERMAN ROBERT M) 6 March 2003 (2003-03-06) abstract paragraphs '0002!,'0005!,'0008!,'0023!; claims 1-3	1-10
P,X	US 2002/087666 A1 (HUFFMAN STEPHEN MARK ET AL) 4 July 2002 (2002-07-04) abstract paragraphs '0001!-'0003!,'0008!,'0034!,'0036! claim 1	1,5,6,10
P,X	US 6 505 240 B1 (BLUMENAU TREVOR I) 7 January 2003 (2003-01-07) abstract column 1, line 6-16 column 10, line 25-46 column 11, line 25-47	1,5,6,10
A	FRANCIS P ET AL: "An architecture for a global Internet host distance estimation service" INFOCOM '99. EIGHTEENTH ANNUAL JOINT CONFERENCE OF THE IEEE COMPUTER AND COMMUNICATIONS SOCIETIES. PROCEEDINGS. IEEE NEW YORK, NY, USA 21-25 MARCH 1999, PISCATAWAY, NJ, USA,IEEE, US, 21 March 1999 (1999-03-21), pages 210-217, XP010323734 ISBN: 0-7803-5417-6 page 210	1,5,6,10

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Information on patent family members

International Application No
PCT/US 03/07178

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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		JP 2002518720 T	25-06-2002
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